

- (c) optionally, finishing an outer surface of the dental prosthesis to customize the fit of the dental prosthesis for repairing or restoring the dentition;

wherein the crystalline ceramic mill blank is not sintered subsequent to step (a).

2. ~~56~~. (New) A method according to claim ~~55~~¹ further comprising a step of applying an aesthetic composite or aesthetic porcelain layer to the dental prosthesis.

3. ~~57~~. (New) A method according to claim ~~55~~¹ wherein the crystalline ceramic mill blank has a density greater than about 99% of the theoretical density of the crystalline ceramic.

4. ~~58~~. (New) A method according to claim ~~57~~³ wherein the crystalline ceramic mill blank has a density greater than about 99.5% of the theoretical density of the crystalline ceramic.

5. ~~59~~. (New) A method according to claim ~~55~~¹ wherein the crystalline ceramic mill blank comprises less than about 5 wt% glass.

6. ~~60~~. (New) A method according to claim ~~59~~⁵ wherein the crystalline ceramic mill blank comprises less than about 2 wt% glass.

7. ~~61~~. (New) A method according to claim ~~55~~¹ wherein the crystalline ceramic mill blank is essentially free of oxy-nitride.

8. ~~62~~. (New) A method according to claim ~~55~~¹ wherein the crystalline ceramic mill blank has a Contrast Ratio value less than about 0.7.

9. ~~63~~. (New) A method according to claim ~~62~~⁸ wherein the crystalline ceramic mill blank has a Contrast Ratio value less than about 0.6.

10. ~~64~~. (New) A method according to claim ~~63~~⁹ wherein the crystalline ceramic mill blank has a Contrast Ratio value less than about 0.5.

11. ~~65~~. (New) A method according to claim ~~55~~¹ wherein the crystalline ceramic mill blank is milled into the shape of the dental prosthesis using a computer controlled milling machine.

12. ~~66~~. (New) A method according to claim ~~65~~¹¹ wherein the crystalline ceramic mill blank is flushed with a liquid lubricant during milling.

13. ~~67~~. (New) A method according to claim ~~65~~¹¹ wherein the crystalline ceramic mill blank is flushed with a stream of air or gas during milling.

14. ~~68~~. (New) A method according to claim ~~65~~¹¹ wherein the crystalline ceramic mill blank is milled into the shape of the dental prosthesis in less than about 3 hours.

15. ~~69~~. (New) A method according to claim ~~68~~¹⁴ wherein the crystalline ceramic mill blank is milled into the shape of the dental prosthesis in less than about 2 hours.

16. ~~70~~. (New) A method according to claim ~~69~~¹⁵ wherein the crystalline ceramic mill blank is milled into the shape of the dental prosthesis in less than about 1 hour.

17. ~~71~~. (New) A method according to claim ~~55~~¹ wherein the crystalline ceramic mill blank, after milling, has a flexural strength greater than about 250 MPa.

18. ~~72~~. (New) A method according to claim ~~71~~¹⁷ wherein the crystalline ceramic mill blank, after milling, has a flexural strength greater than about 350 MPa.

19. ~~73~~. (New) A method according to claim ~~72~~¹⁸ wherein the crystalline ceramic mill blank, after milling, has a flexural strength greater than about 500 MPa.

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26.74 (New) A method according to claim *55*¹ wherein the crystalline ceramic mill blank is nanocrystalline ceramic.

2.75 (New) A method according to claim *58*¹ wherein the crystalline ceramic mill blank is provided as cube, an elongate bar or a solid cylinder.

22.76 (New) A method of making a dental prosthesis for repairing or restoring dentition, the method comprising the steps:

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- (a) providing a crystalline ceramic mill blank wherein the ceramic is crystalline aluminum oxide that has less than 5 wt. % glass, is essentially free of oxy-nitride, and has a density greater than about 99.5% of the theoretical density of the crystalline aluminum oxide;
 - (b) using a computer controlled milling machine to mill the crystalline ceramic mill blank from step (a) into the shape of the dental prosthesis;
 - (c) applying an aesthetic composite or aesthetic porcelain layer to the milled product from step (b); and
 - (d) optionally, finishing an outer surface of the dental prosthesis to customize the fit of the dental prosthesis for repairing or restoring the dentition;

wherein the crystalline ceramic mill blank is not sintered subsequent to step (a).

23.77 (New) A method according to claim *76*²² wherein the crystalline ceramic mill blank is milled into the shape of the dental prosthesis in less than about 1 hour.

24.78 (New) A method according to claim *76*²² wherein the dental prosthesis for repairing or restoring dentition is an onlay, a veneer, a full crown, a partial crown, a bridge, an implant or a post.

25.79 (New) A method according to claim *76*²² wherein the crystalline ceramic mill blank comprises a crystalline ceramic body attached to a stub for mounting the mill blank in the milling machine.
